

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-015735**Date Inspected:** 16-Jul-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

**CWI Name:** Gao Zhi Chun  
**Inspected CWI report:** Yes No N/A  
**Electrode to specification:** Yes No N/A  
**Qualified Welders:** Yes No N/A  
**Approved Drawings:** Yes No N/A

**CWI Present:** Yes No  
**Rod Oven in Use:** Yes No N/A  
**Weld Procedures Followed:** Yes No N/A  
**Verified Joint Fit-up:** Yes No N/A  
**Approved WPS:** Yes No N/A  
**Delayed / Cancelled:** Yes No N/A

**Bridge No:** 34-0006**Component:** Tower & OBG Components**Summary of Items Observed:**

On this date Caltrans Office of Structural Materials Quality Assurance Inspector, Sandeep Kumar (QA) was present during the times noted above for observations relative to the work being performed.

BAY#10

This QA Inspector observed the following work not in compliance:

Description of Incident:

During the random in-process visual inspection on Lift-5 North and South Tower Shafts, this Quality Assurance Inspector (QA) discovered the following issue:

-On Lift-5 North and South Tower saddle Grillage assemblies; welding sequence followed by ZPMC is not as per the fabrication procedure.

-According to the detailed weld sequence, "First weld the grillage plate and face plate", "Then weld the joint between the grillage plates". Whereas ZPMC first started welding the joints between the grillage plates.

Applicable reference:

As per the Fabrication Procedure "Tower Saddle Grillage Fabrication, Assembly, Erection procedure"

This QA notified ZPMC QC's identified as Mr.Li Peng Fei / Mr.Yu Zhi Lai and ABF inspector identified as Mr. Yang Yi Heng of the above issue and that an incident report will be generated.

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For further information see below pictures:-

### BAY#11

This QA Inspector observed the following work in progress

Shielded Metal Arc Welding (SMAW):

Weld joint # 2B located on Lift-5 Splice Plate Stiffener WSD1 – SPSA5 – 12. Welder is identified as 046704. ZPMC Quality Control (QC) Inspector is identified as Liu Dao Feng. The welding variables recorded by QC appeared to comply with the WPS – B – T – 3211 – Tc – U5b – 1.

Weld joint # 3B located on Lift-5 Splice Plate Stiffener ESD1 – SPSA5 – 12. Welder is identified as 040614. ZPMC Quality Control (QC) Inspector is identified as Liu Dao Feng. The welding variables recorded by QC appeared to comply with the WPS – B – T – 3211 – Tc – U5b – 1.

Weld joint # 2A located on Lift-5 Splice Plate Stiffener WSD1 – SPSA5 – 20. Welder is identified as 040667. ZPMC Quality Control (QC) Inspector is identified as Liu Dao Feng. The welding variables recorded by QC appeared to comply with the WPS – B – T – 3211 – Tc – U5b – 1.

Weld joint # 4B located on Lift-5 Splice Plate Stiffener WSD1 – SPSA5 – 7. Welder is identified as 040656. ZPMC Quality Control (QC) Inspector is identified as Ma Qian Li. The welding variables recorded by QC appeared to comply with the WPS – B – T – 3211 – Tc – U5b – 1.

### ORTHOTROPIC BOX GIRDER (OBG) LIFT-13 AT BAY#11

This QA Inspector observed the following work in progress

Fluxcored Arc Welding (FCAW):

Weld joint # 77 located on Side Plate SP3067 – 001. Welder is identified as 040723. ZPMC Quality Control (QC) Inspector is identified as Ma Qian Li. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2232 – B – U2 – F.

Weld joint # 106 located on Side Plate SP3107 – 001. Welder is identified as 046706. ZPMC Quality Control (QC) Inspector is identified as Ma Qian Li. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2232 – B – U2 – F.

Weld joint # 79 located on Side Plate SP3067 – 001. Welder is identified as 205649. ZPMC Quality Control (QC) Inspector is identified as Ma Qian Li. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2232 – B – U2 – F.

### MEASUREMENTS ON TOWER STRUTS

This QA Inspector measured the length of the Tower Struts. Measurements were recorded on the data sheet and submitted to the assigned task leader. The identified component designations reviewed are as follows

#### TOWER STRUTS

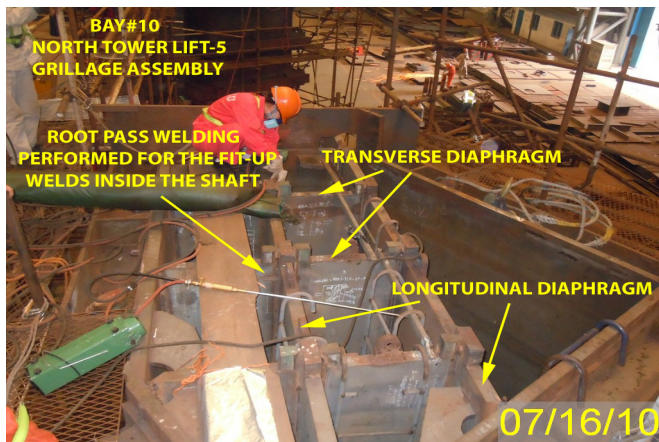
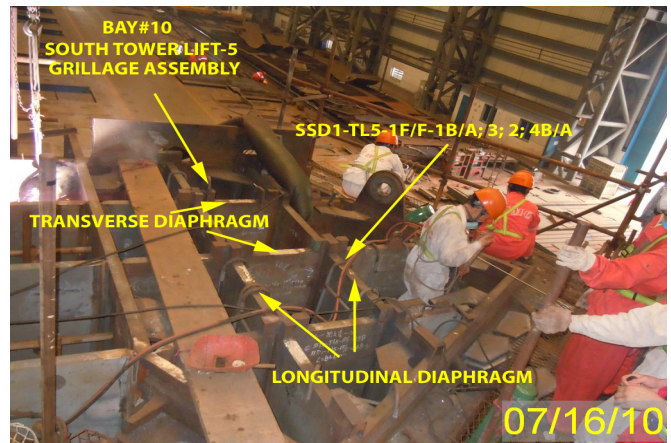
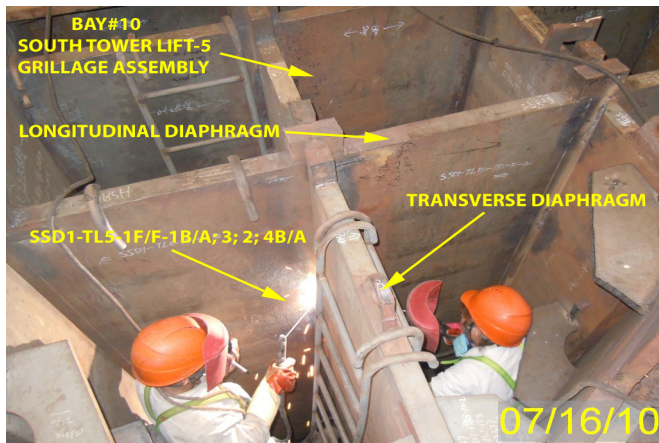
1. ED1 – STSA4 – 6 – 139M – 2
2. ED1 – STSA4 – 6 – 139M – 1

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3. ED1 – STSA4 – 6 – 139M – 2
4. ND1 – STSA4 – 6 – 131M – 1
5. ED1 – STSA4 – 6 – 127M – 2
6. ED1 – STSA4 – 6 – 131M – 2
7. ND1 – STSA4 – 6 – 131M – 2
8. ED1 – STSA4 – 6 – 123M – 2
9. ND1 – STSA4 – 6 – 135M – 2
10. ED1 – STSA4 – 6 – 127M – 1

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



## Summary of Conversations:

No Relevant Conversations.

## Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Michael Ng - 15921845703, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Kumar,Sandeep	Quality Assurance Inspector
<b>Reviewed By:</b>	Clifford,William	QA Reviewer

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